

IN THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) An orthopaedic support for comfortably supporting the ankle of a wearer, comprising:

an outer shell formed for fitting about the lower leg of the wearer;

a molded pad bonded to said shell;

an overmold that substantially surrounds said pad and said shell substantially sealing together said orthopaedic support;

said pad having a base layer;

said pad having a plurality of molded substantially hollow structures to provide differing levels of cushioning support for the wearer of the orthopaedic support at different areas of the pad, at least some of said structures having a different dimension than others of said structures; and

said hollow structures extending substantially perpendicular from said base layer;

said hollow structures being integrally molded with said base layer;

wherein said molded structures comprise walls, said walls providing cushioning support for the ankle and having a self supporting free standing construction even without inflating or otherwise filling said molded structures with air, liquid, or gel or the like.

2. (Cancelled)

3. (Original) An orthopaedic support as defined in claim 1 further comprising an overmold molded onto said shell, said pad being bonded to said overmold.

4. (Original) An orthopaedic support as defined in claim 1 further comprising means for securing said ankle support around the lower leg; and a heel strap for securing said orthopaedic support.

5. (Cancelled)

6. (Original) An orthopaedic support as defined in claim 1 wherein an inner liner of cloth is secured to said pad on the surface of said pad facing the lower leg of the user.

7. (Original) An orthopaedic support as defined in claim 6 wherein said liner is integrated with said pad.

8. (Original) An orthopaedic support in accordance with claim 7 wherein said liner includes openings allowing air to pass in and out of said structures.

9. (Original) An orthopaedic support as defined in claim 1, wherein said pad further comprised a plurality of fingers extending from said pad to said outer shell.

10. (Original) An orthopaedic support as defined in claim 9, wherein said fingers are integrally molded with said pad.

11. (Original) An orthopaedic support as defined in claim 9, wherein some of said fingers have a different length than others of said fingers.

12. (Cancelled)

13. (Currently Amended) An orthopaedic support for comfortably supporting a select area of the anatomy, said support comprising:

a substantially rigid shell; and

an injection molded resilient pad between said shell and the anatomy of the user, said pad configured with geometric shaped cells providing cushioning and support
wherein said pad is molded directly onto said shell as channels, domes, and other supportive geometrical shapes to cushion and to support the anatomy;

said pad including a base layer, and said cells being integrally molded with said base layer and extending substantially perpendicular from said base layer;

wherein said cells comprise walls, the structure of said walls providing cushioning support for the select area of the anatomy and having a self-supporting free-standing construction even without inflating the cells with air or otherwise filling said cells with liquid, or gel or the like.

14. (Original) An orthopaedic support as defined in claim 13 further comprising an overmold molded onto said shell, said pad being connected to said overmold.

15. (Original) An orthopaedic support as defined in claim 13 wherein said pad is a bladder having a plurality of cells having cushioning geometric shapes and protrusions, each cell with predetermined size, depth, and wall thickness providing varying levels of localized support and cushion in different areas of said support.

16. (Original) An orthopaedic support as defined in claim 15 wherein said geometric shapes for said bladder are selected from the group consisting of ribs, cylinders, honeycomb, and regular and irregular polygons.

17. (Original) An orthopaedic support as defined in claim 15 wherein channels are provided between said cells for allowing a fluid to pass between and among said cells, creating a massaging effect on the ankle and promoting blood flow.

18. (Cancelled)

19. (Cancelled)

20. (Original) An orthopaedic support as defined in claim 13 wherein said pad further comprises a foam core for softer inner cushion.

21. (Original) An orthopaedic support as defined in claim 13 wherein a co-molded lip around said shell and around said pad seals said pad such that air is trapped between said pad and said shell, creating a bladder with air cushion.

22. (Cancelled)

23. (Original) An orthopaedic support as defined in claim 13 wherein said pad includes a plurality of fingers extending from said pad to said shell.

24. (Currently Amended) An orthopaedic support comprising:
a substantially rigid shell formed to fit a limb of a user;
an injection molded resilient pad for cushioning the shell to the limb wherein said pad includes interconnected cells, and further comprises a heel bladder fluidically coupled to said pad for varying the pressure exerted by said pad on the limb of the user;
said injection molded pad being integrally molded in a single molding step; and
said pad including a base layer and integrally molded structures protruding from said base layer, said structures having a self supporting free standing construction even without inflating or otherwise filling said structures with air, liquid, or gel or the like.

25. (Cancelled)

26. (Original) An orthopaedic support pad as defined in claim 24 wherein said pad is a bladder having geometrically shaped cells to provide differing levels of localized

cushioning and a plurality of channels molded between said cells to allow air and fluid to pass between said cells.

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Original) An orthopaedic support as defined in claim 24 wherein a breathable liner covers said pad.

31. (Original) An orthopaedic support as defined in claim 24 wherein said pad includes a plurality of integrally-molded fingers extending from said pad to said shell.

32. (Original) An orthopaedic support as defined in claim 24 further comprising an overmold molded onto said shell.

33. (Currently Amended): An orthopaedic support for comfortably supporting the ankle comprising:

an ankle support formed for fitting about the lower leg; having appropriate configuration to support the ankle;

said ankle support comprising a substantially rigid outer shell and a molded pad for cushioning;

said pad having a base layer and an inner construction including resilient material having cells therein for providing resilient support to the ankle;

said base layer and said cells being integrally molded together;

said pad being bonded to said outer shell; and

wherein said outer shell has a least one opening to allow air to escape from space in between said outer shell and said pad, said cells providing resilient support to the ankle from the structure of the cells and having a self supporting free standing construction even without being filled with air, liquid, or gel or the like.

34. (Original) An orthopaedic support as defined in claim 33 wherein at least some of said air spaces are filled with foam for cushioning.

35. (Cancelled)

36. (Original) An orthopaedic support as defined in claim 33 wherein said pad includes a plurality of fingers extending from said pad toward said shell.

37. (Original) An orthopaedic support as defined in claim 33 further comprising an overmold molded onto said shell.

38. (Original) An orthopaedic support as defined in claim 37 wherein said pad is bonded to said overmold.

39. (Cancelled)

40. (Original) An orthopaedic support as defined in claim 33 wherein said pad includes a plurality of air holes to prevent formation of a bladder between said pad and said shell.

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (Cancelled)

49. (Cancelled)

50. (Original) An orthopaedic support for comfortably supporting the ankle of a wearer, comprising:

an outer shell formed for fitting about the lower leg of the wearer;

a molded pad bonded to said shell;

said pad having a surface; and

said pad having a plurality of molded structures to provide differing levels of cushioning support for the wearer of the orthopaedic support at different areas of the pad, at least some of said structures having a different dimension than others of said structures;

wherein said pad further comprises a plurality of fingers extending from said pad to said outer shell;

some of said fingers having a different length than others of said fingers; and

said support having a malleolar region that is adapted to be placed against a malleolus of an ankle, said malleolar region having fingers of a greater length than fingers in other regions of said support.

51. (Cancelled)

52. (Original) An orthopaedic support comprising:
a substantially rigid shell formed to fit a limb of a user;
an injection molded pad for cushioning the shell to the limb;
said injection molded pad being integrally molded in a single molding step;
wherein said pad is a bladder having geometrically shaped cells to provide
differing levels of localized cushioning and a plurality of channels molded between said
cells to allow air and fluid to pass between said cells;
wherein at least one cell defines a closed space forming an internal bladder.

53. (Cancelled)

54. (Original) An orthopaedic support for comfortably supporting the ankle
comprising:

an ankle support formed for fitting about the lower leg, having appropriate
configuration to support the ankle;
said ankle support comprising a substantially rigid outer shell and a molded pad
for cushioning;

said pad having an inner surface and an outer layer, said inner surface including
resilient material having cells therein for providing resilient support to the ankle; and

said pad being bonded to said outer shell;

wherein said outer shell has at least one opening to allow air to escape from space
in between said outer shell and said pad, said cells providing resilient support to the ankle
from the structure of the cells even without being filled with air;

wherein at least some of said air spaces are filled with foam for cushioning; and
wherein said foam surrounds but not covers the malleolus.

55. (Currently Amended) An orthopaedic support for comfortably supporting the ankle comprising:

an ankle support formed for fitting about the lower leg, ~~having appropriate configuration adapted~~ to support the ankle;

said ankle support comprising a substantially rigid outer shell and a molded pad for cushioning;

said pad having an inner surface and an outer layer, said inner surface including resilient material having cells therein for providing resilient support to the ankle; and

said pad being bonded to said outer shell;

wherein said outer shell has at least one opening to allow air to escape from space in between said outer shell and said pad, said cells providing resilient support to the ankle from the structure of the cells even without being filled with air;

wherein said orthopaedic support further comprises an overmold molded onto said shell;

wherein said pad is bonded to said overmold; and

wherein said overmold includes a ridge extending about the periphery of the overmold, said pad having an outer edge that engages with said ridge.

56. (Currently Amended) An orthopaedic support for comfortably supporting the ankle comprising:

an ankle support formed for fitting about the lower leg, ~~having appropriate configuration adapted~~ to support the ankle;

said ankle support comprising a substantially rigid outer shell and a molded pad for cushioning;

said pad having an inner surface and an outer layer, said inner surface including resilient material having cells therein for providing resilient support to the ankle; and

said pad being bonded to said outer shell;

wherein said outer shell has at least one opening to allow air to escape from space in between said outer shell and said pad, said cells providing resilient support to the ankle from the structure of the cells even without being filled with air; and

wherein said pad has a non-uniform skin thickness, said pad having at least one region having skin that is thicker than at least one other region, in order to improve the function of the support.

57. (Cancelled)

58. (Cancelled)

59. (Cancelled)

60. (Cancelled)

61. (New) An orthopaedic support for comfortably supporting the ankle of a wearer, comprising:

an outer shell formed for fitting about the lower leg of the wearer;

a molded pad bonded to said shell;

said pad having a surface;

said pad having a plurality of molded substantially hollow structures to provide differing levels of cushioning support for the wearer of the orthopaedic support at different areas of the pad, at least some of said structures having a different dimension than others of said structures;

wherein said molded structures comprise walls, said walls providing cushioning support for the ankle even without inflating or otherwise filling said molded structures with air, liquid, gel or the like; and

said pad further comprising a plurality of fingers extending from said pad to said outer shell, said fingers being integrally molded with said pad; and some of said fingers having a different length than others of said fingers.

62. (New) An orthopaedic support comprising:

a substantially rigid shell formed to fit a limb of a user;

an injection molded pad for cushioning the shell to the limb;

said injection molded pad being integrally molded in a single molding step;

said pad comprising bladder having geometrically shaped cells to provide differing levels of localized cushioning and a plurality of channels molded between said cells to allow air and fluid to pass between a said cells; and

wherein at least one cell defines a closed space forming an internal bladder.

63. (New) An orthopaedic support comprising:

a substantially rigid shell formed to fit a limb of a user;

an injection molded pad for cushioning the shell to the limb;

said injection molded pad being integrally molded in a single molding step; and

wherein said shell further comprises a shell frame and a shell core which is removably mounted within said shell.

64. (New) An orthopaedic support for comfortably supporting the ankle comprising:

an ankle support formed for fitting bout the lower leg, having appropriate configuration to support the ankle;

said ankle support comprising a substantially rigid outer shell and a molded pad for cushioning;

said pad having an inner surface and an outer layer; said inner surface including resilient material having cells therein for providing resilient support to the ankle;

said pad being bonded to said outer shell;

wherein said outer shell has at least one opening to allow air to escape from space in between said outer shell and said pad, said cells providing resilient support to the ankle from the structure of the cells even without being filled with air, liquid, gel or the like;

wherein at least some of said air spaces are filled with foam for cushioning, and said foam surrounds but does not cover the malleolus.

65. (New) An orthopaedic support for comfortably supporting the ankle comprising:

an ankle support formed for fitting about the lower leg, having appropriate configuration to support the ankle;

said ankle support comprising a substantially rigid outer shell and a molded pad for cushioning;

said pad having an inner surface and an outer layer; said inner surface including resilient material having cells therein for providing resilient support to the ankle; and

said pad being bonded to said outer shell;

wherein said outer shell has at least one opening to allow air to escape from space in between said outer shell and said pad, said cells providing resilient support to the ankle from the structure of the cells even without being filled with air, liquid, gel or the like; and

an overmold molded onto said shell, with said pad being bonded to said overmold, and said overmold including a ridge extending about the periphery of the overmold, said pad having an outer edge that engages with said ridge.

66. (New) An orthopaedic support for comfortably supporting the ankle comprising:

an ankle support formed for fitting about the lower leg, having appropriate configuration to support the ankle;

said ankle support comprising a substantially rigid outer shell and a molded pad for cushioning;

said pad having an inner surface and an outer layer; said inner surface including resilient material having cells therein for providing resilient support to the ankle; and
said pad being bonded to said outer shell;

wherein said outer shell has at least one opening to allow air to escape from space in between said outer shell and said pad, said cells providing resilient support to the ankle from the structure of the cells even without being filled with air, liquid, gel or the like;
and

said pad having a non-uniform skin thickness, said pad having at least one region having skin that is thicker than at least one other region, in order to improve the function of the support.

67. (Cancelled)

68. (Cancelled)